

BRIEF COMMUNICATIONS

Harvesting the best: evidence-based analysis of herbal handbooks for clinicians*

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INTRODUCTION

The recent increase and widespread use of herbs and dietary supplements (H/DS) extends across the life-span from pediatric to geriatric patients [1–4]. Patients with chronic conditions are among the heaviest users as they constantly search for additional ways to relieve their symptoms and discomfort [5, 6]. At the same time, a parallel proliferation in the literature has been published on the subject: 405 books on medicinal herbs were published from 1986 to 1989, with more than 1,000 titles appearing between 2000 and 2004 [7]. Clinicians and patients have many sources of information, but selection of the most reliable references is a challenge. Lack of information on potential toxicities, adverse effects, and interactions with medications, other herbs, laboratory tests, and disease states becomes critical in providing health care. Due to time constraints during clinical encounters, many clinicians prefer the convenient presentation and concise entries afforded by handbooks [8].

The objective of this pilot project was to develop criteria for evaluating the quality of tertiary literature on medicinal herbs and dietary supplements and to apply these criteria to selected handbooks intended for clinicians. The tertiary literature is defined here to include textbooks, compendia, and full-text computer databases [9].

* Based on a poster presentation at MLA '05, the 105th Annual Meeting of the Medical Library Association; San Antonio, TX; May 16, 2005.

 Complete paper available with the online version of Brief Communications (J Med Libr Assoc. 2006 October; 94(4):E-208–E-213.

Information-seeking behavior of faculty in one school of public health*

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INTRODUCTION

Background

To date, a relatively small number of studies have examined the information needs and behaviors of public health practitioners, with most of the research funded by recent National Library of Medicine (NLM) and National Network of Libraries of Medicine (NN/LM) initiatives [1–4]. One segment of the public health workforce whose information needs have not yet been examined is faculty members in schools of public health. Public health faculty are the teachers and mentors of many future public health practitioners and therefore have an opportunity to shape where and how the public health workforce seeks information. The results of this research will be used to modify or develop outreach efforts to faculty in a school of public health.

This research study attempted to answer three questions:

- What are the current information-seeking behaviors of the faculty of the University of Illinois at Chicago (UIC) School of Public Health (SPH)?
- What are their perceived barriers to obtaining information?
- What are their preferences for additional library services?

Setting

The UIC SPH is one of 37 schools of public health accredited by the Council on Education for Public Health (CEPH) [5]. The school offers degrees in 4 academic divisions: community health sciences, environmental and occupational health sciences, epidemiology and biostatistics, and health policy and administration [6]. The highest percentage of recent graduates (30.1%) specialized in health policy and administration. In the fall of 2004, a total of 528 students were enrolled in the SPH, making it the 16th largest SPH in terms of enrollment [7]. The Library of the Health Sciences–Chicago (LHSC) is the primary library for the SPH.

* Based on a poster at MLA '05, the 105th Annual Meeting of the Medical Library Association; San Antonio, TX; May 16, 2005.


 Supplemental electronic content is included with this paper on PubMed Central.

Table 1
Respondent demographics

Variables	Percent (N)
Academic division (N = 42)	
Community health sciences	16.7 (7)
Environmental and occupational health	23.8 (10)
Epidemiology and biostatistics	33.3 (14)
Health policy and administration	26.2 (11)
Current faculty rank (N = 42)	
Full professor	31.0 (13)
Associate professor	31.0 (13)
Assistant professor	28.6 (12)
Instructor/lecturer	2.4 (1)
Other	7.1 (3)
Length of time as University of Illinois at Chicago (UIC) faculty (N = 41)	
Less than 1 year	7.3 (3)
1 to less than 3 years	14.6 (6)
3 to less than 6 years	14.6 (6)
6 to less than 10 years	17.1 (7)
10 or more years	46.3 (19)

METHODS

In October 2004, the LHSC liaison to the SPH invited all UIC SPH faculty members to complete a UIC Institutional Review Board–approved online survey about their information-seeking behaviors. The faculty members were identified from the school's Website and from faculty lists obtained from each division's administrative office. The SPH liaison developed the survey instrument online using the Survey-Monkey.com Website. The final instrument consisted of fifteen questions, some of which were multipart (supplemental appendix online). The initial email survey invitation was sent by the liaison. Follow-up email messages were sent by the liaison and the SPH senior associate dean three and four weeks after the initial invitation, respectively. Approximately one-third of re-

sponses were received after the latter reminder. Data collection began in October 2004 and was completed by December 2004.

RESULTS AND DISCUSSION

Of the 210 survey invitations distributed, 47 surveys were submitted, though 2 were substantially incomplete and were excluded from analysis. After considering undeliverable emails and refusals to participate, and assuming that unreturned email messages were successfully delivered, the approximate response rate—based on guidelines developed by the American Association for Public Opinion Research—was calculated to be 23.6% [8], a figure that is in line with online surveys [9]. This figure represents a complete response by 45 participants out of 190 potential contacts (Table 1).

Current information-seeking behavior

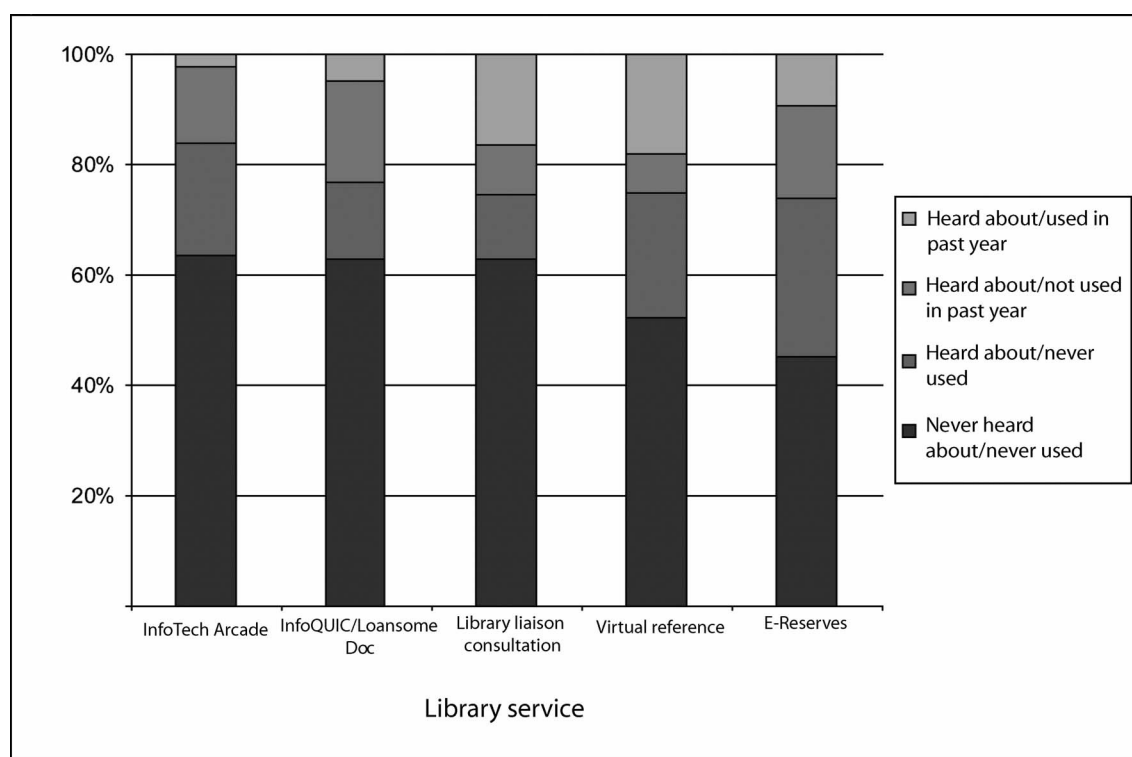
In terms of *frequency* of use of information resources for research, teaching, or service information needs, Web searches were most frequently employed, used daily by 56.8% (N = 25) of respondents. Article databases were the next most frequently used resources with 17.8% (N = 8) of participants using them daily, 40.0% (N = 18) weekly, and 31.1% (N = 14) monthly (Table 2). Alternatively, most faculty did not use the existing library help resources very often, as 97.7% (N = 42) used the library's virtual reference service once a semester or less, and 86.4% (N = 38) relied on a librarian to meet their information needs once a semester or less (Figure 1).

When asked to rank the *usefulness* of the same resources, article databases were viewed as the most valuable resource. Thirty-five faculty members (81.4%) indicated they were one of the top three most useful

Table 2
Public health faculty's frequency of use and perceived usefulness of information resources

Information resource	Frequency					Usefulness
	Daily	Weekly	Monthly	Once a semester	Rarely/never	Times ranked in top 3
Article databases	17.8	40.0	31.1	6.7	4.4	35
Journal subscriptions, UIC libraries	34.1	27.3	25.0	9.1	4.5	26
Web search engines	56.8	27.3	9.1	4.5	2.3	14
Journal subscriptions, personal collection	23.3	34.9	16.3	11.6	14.0	8
Books, not textbooks	2.3	16.3	37.2	27.9	16.3	7
Favorite or bookmarked Websites	9.1	43.2	25.0	13.6	9.1	6
Textbooks	2.3	20.5	34.1	25.0	18.2	5
Journal subscriptions, non-UIC libraries	7.1	21.4	28.6	19.0	23.8	4
Colleagues in public health agencies	4.7	18.6	20.9	27.9	27.9	3
Colleagues in UIC School of Public Health (SPH)	7.0	25.6	32.6	18.6	16.3	3
Electronic discussion lists	18.6	11.6	7.0	14.0	48.8	3
Librarians, UIC	0	6.8	6.8	29.5	56.8	3
Media	13.6	13.6	22.7	22.7	27.3	2
Online catalog, UIC	6.8	15.9	31.8	18.2	27.3	2
Professional conferences	0	6.8	38.6	40.9	13.6	2
Professional organizations' publications	2.4	19.5	34.1	26.8	17.1	2
Gray literature	2.3	18.6	25.6	27.9	25.6	1
Statistics databases	0	15.9	36.4	18.2	29.5	1
Librarians, non-UIC	0	0	4.7	11.6	83.7	0
Online catalog, non-UIC	2.3	4.5	20.5	18.2	54.5	0
UIC's Ask-a-Librarian service (virtual reference)	0	0	2.3	25.6	72.1	0

Figure 1
Public health faculty's awareness and use of library services



information resources they consulted, followed by journal subscriptions available through the campus library and Web search engines (Table 2). Librarians and online catalogs at non-UIC libraries were rated among the least useful resources.

One of the more surprising findings was public health faculty's frequency of use and perceived usefulness of the gray literature. Only 46.5% ($N = 20$) consulted gray literature resources at least monthly, and only 1 respondent ranked gray literature in the top 3 most useful resources. Gray literature has been shown to be a commonly sought type of resource in public health, at least among practitioners [3, 4]. Figure 2 shows the 5 resources with which faculty considered themselves least proficient, based on the greatest proportion of nonuse or beginner skill level.

Barriers to information access

Perceived barriers to using information resources were lack of time or knowledge, as has been demonstrated repeatedly in other studies of faculty [10–14]. Thirty-seven respondents (82.2%) frequently or sometimes encountered a lack of knowledge about what resources were available to them. Time issues were frequently encountered as well, with most respondents indicating they frequently or sometimes had neither time for searching for information (77.8%, $N = 35$) nor for learning how to use an information resource (77.8%, $N = 35$). Rarely did public health faculty members at

UIC experience a lack of hardware or software as a barrier to retrieving needed information. This study did not address whether faculty perceived a need for information—another potential barrier.

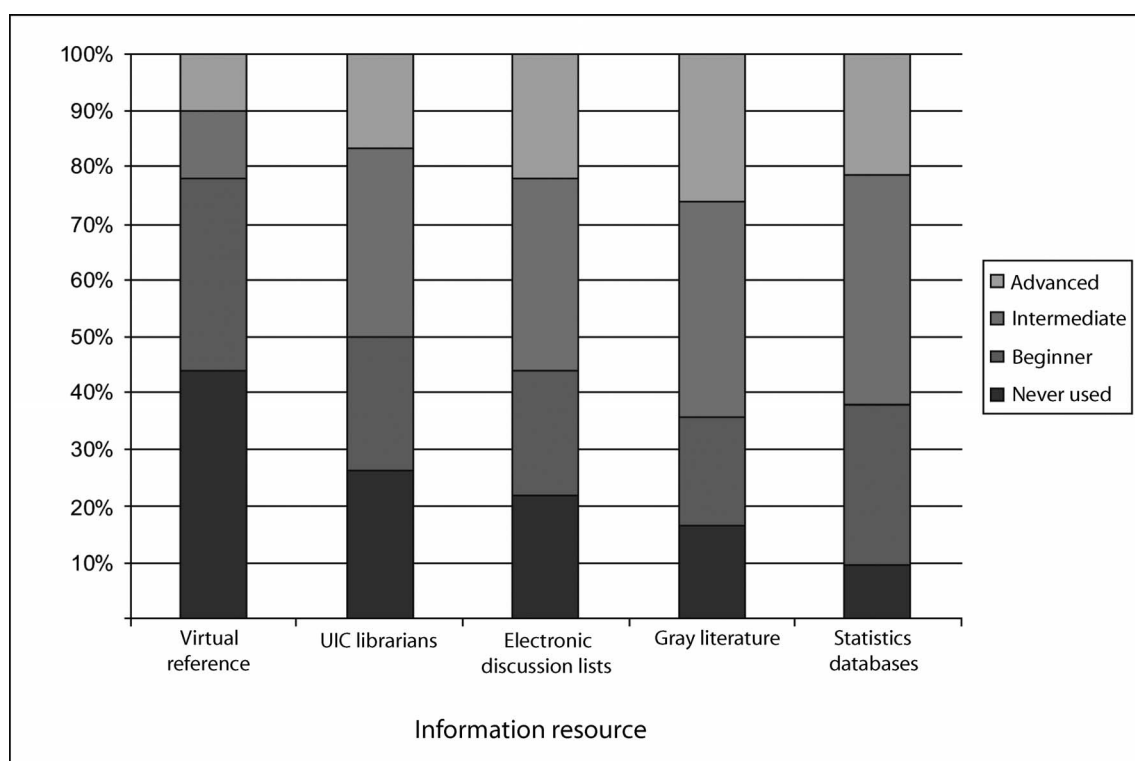
Preferences for library support services

The data from this survey will refine and develop future library services. When asked about personal preferences for library or information services to support their UIC research, teaching, and service, faculty had a clear desire for as-needed assistance. The largest number of respondents (75.6%, $N = 34$) indicated they would prefer emailing a librarian as questions arise; a close second (60.0%, $N = 27$) was the option of telephoning a librarian as questions arise. User self-sufficiency with increasing regular use of the Internet was reflected by preferences for online tutorials to learn more about the library's resources (53.3%, $N = 24$). Time restrictions meant fewer faculty members were interested in hands-on classes, a common method of teaching information resource use in academic libraries.

CONCLUSIONS

Though these results generally reflect trends in faculty use of the library reported in previous studies, they provide a snapshot of opinions of faculty at one school of public health and may be limited in generalizability.

Figure 2
Information resources with which public health faculty are least proficient



Additionally, as is often the case with research of this type, the results represent a subjective assessment of information needs and use. Despite these limitations, three overall findings emerged in the study.

First, SPH faculty regularly sought out information to support their research, teaching, and service, though they did not tend to ask librarians for assistance. Faculty who had been at the UIC SPH ten years or more were significantly more likely ($P = 0.02$; chi square test) to sometimes contact a librarian (56.3%) than faculty who had been at the institution less than 10 years (20.0%). This finding demonstrates a clear shift in the self-sufficiency of library users over time. Faculty members who have been at the institution longer were perhaps more aware of the library and its services as well.

Second, future outreach should be aimed at educating SPH faculty members about ways the library can help them access information more efficiently. Though this survey did not inquire about the time spent using information resources, some of the open-ended responses indicated either a lack of awareness of or frustration with methods for accessing the library's holdings, both of which result in greater time spent *searching* versus *finding* needed information. Of particular concern were comments indicating that the respondents "could never find [articles they needed]" or "have had some difficulty finding existing references" that they knew to be on the library's shelves. A focus on the fundamentals of library use on this cam-

pus—including the online catalog, interlibrary loan, and reference assistance—would save a great deal of frustration for this population.

A third important finding was that educational efforts are most desired on an as-needed basis, indicating the need for increasing librarian visibility and availability and confirming results of earlier studies [15, 16]. Rather than developing workshops for faculty, the liaison should instead publicize contact information, as faculty members indicated they would prefer to ask for assistance as questions arise. As a relationship develops between the faculty members and the liaison librarian, opportunities for education and training can increase. These findings may help libraries identify opportunities for outreach to public health faculty, whose needs differ from public health students and practitioners.

ACKNOWLEDGMENTS

The author thanks her colleagues at the UIC University Library for their comments and suggestions on the survey and resulting manuscript.

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Received October 2005; accepted February 2006

Subject specialization in a liaison librarian program

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INTRODUCTION

Liaison librarians focus their work in a particular subject area and provide services to clients in that discipline. The value of and need for formal subject background for such liaisons have been debated for decades [1]. Some believe a relevant background (either through a degree or work experience in the field) is beneficial but not a necessity [2, 3], while others find a formal academic background is vital to this type of work [4, 5]. These differences of opinion are often related to the degree of subject-specific services provided by the liaison program; multitiered programs often require formal education in a subject area for liaisons at the higher or more specialized level [6]. The information specialist in context (ISIC) or informationist, a new career path evolving in health sciences, integrates hybrid specialists with formal training in both information management and a particular subject discipline or other expert training into clinical or research teams [7, 8].

Tennant et al. [9] described the formal evaluation of the University of Florida Health Science Center Library's (HSCL's) Liaison Librarian Program (LLP) 5 years after its inception. Although the response rate for the client portion of the survey was low, results indicated that 95% of faculty and student respondents who had contact with their liaisons ($n = 101$) supported continuing the LLP; furthermore, responses to open-ended questions suggested that clients were satisfied with both the program and their particular liaisons' services.

In discussion of such models, debate often arises regarding the amount of subject knowledge required for traditional liaisons to provide satisfactory subject-related services and strategies for obtaining such exper-

tise. The current subset analysis of the survey by Tennant et al. [9] strives to address questions about clients' perception of subject background, effect of liaison background on client satisfaction, and potential educational strategies of these liaisons.

METHODS

Client ($n = 323$) and liaison ($n = 10$) responses to three questions in the surveys (Appendix) comprise the data source for the current report. Further details of the full survey—including construction and dissemination, data analysis, and potential study limitations—are provided in Tennant et al. [9].

RESULTS

Clients' perspective

When responses from faculty and students regarding the importance of subject background and liaison involvement in the client's field were considered, the same pattern was discerned across respondents from each of the colleges surveyed: subject background was rated higher than involvement in the field. On a scale of 0 to 2 (0 = Not important, 1 = Important, 2 = Very important), students (mean 1.45, $n = 133$) ranked subject background as more important than did faculty (1.28, $n = 109$). No discernible patterns were noted among the surveyed Health Science Center (HSC) colleges (dentistry, health professions and public health, medicine, nursing, pharmacy, and veterinary medicine). Among all HSC faculty respondents, 89% indicated a subject background was "very important" or "important."

Conversely, liaison "involvement in field" seems to be somewhat less important to clients. Students (mean 1.03, $n = 133$) scored involvement higher than did faculty (mean 0.89, $n = 111$) on the 0 to 2 scale. College of nursing faculty provided the highest score (mean 1.14; $n = 22$), while the faculty score for the other 5 colleges combined was a mean of 0.83 ($n = 89$).

Liaisons' perspective

Surveyed liaisons were asked to indicate which of eight listed methods they have used to gain subject expertise (Appendix). The ten respondents performed a mean of four of the listed tasks (range 0–8) (Table 1). Liaisons reported a variety of methods that they used to keep abreast of the educational and research priorities and politics of their assigned academic units. They also listed strategies used to develop the personal touch that clients described as so important in the LLP evaluation [9]. Liaisons attended departmental seminars and social events; performed periodic literature searches on their faculty's publications; kept track of their students' dissertations; read faculty and unit Web pages, unit newsletters and other promotional materials; and attended faculty meetings.

Table 1
Activities liaisons use to gain subject knowledge

Activity	Percentage of liaisons performing activity ($n = 10$)
Read the subject literature	80
Joined the appropriate Medical Library Association (MLA)/Special Libraries Association (SLA) email discussion list(s)	80
Joined the appropriate MLA/SLA section, division, special interest group	70
Took continuing education course(s) in the subject area	60
Frequently visited department faculty Web pages	40
Read academic department newsletters	40
Attended academic seminar(s) in the subject areas	30
Took academic course(s) in the subject area	10
Other responses:	
Attended or exhibited at subject-related association conferences	30
Attended departmental academic social events	20
Joined nonlibrarian subject email lists	10
Joined nonlibrary professional organization	10
Read subject specialty news alerts (Biomednet, Medscape)	10
Took courses on broader library job-related issues	10

DISCUSSION

The LLP has emphasized liaison development [10], and, considering the importance that faculty place on subject background (mean score of 1.28), this emphasis seems well placed. The results of the current survey subset analysis suggest that clients value liaison subject background, and such results have implications for liaison training and marketing. In a similar survey, Yang [11] reported that 82.1% of faculty representatives felt that it was "very important" or "important" for liaisons to have subject background.

At the HSCL, becoming involved in appropriate organizations has been one successful method for gaining subject background. For example, the HSCL liaisons are active in eleven different Medical Library Association (MLA) and Special Libraries Association subunits related to their liaison assignments. Some liaisons are active members in the professional societies of their clients or have exhibited at their conferences. Feedback gathered in the current survey indicates that liaisons find such mechanisms—including library association subunits, email lists, online journal clubs, programming, and continuing education opportunities—essential in developing subject expertise. Liaisons also use internal resources to develop their knowledgebases; to facilitate learning from the successes of other liaison librarians, the HSCL's LLP encourages open sharing of ideas in a quarterly liaison forum and has used written reports to keep track of activities and note patterns of similarity among unit and client information needs.

Some liaison programs, such as the HSCL's, have developed tiers for their liaisons or subject specialists in which liaisons in one service tier provide only basic assistance while liaisons in a higher tier provide more specialized services [6]. The majority of HSCL liaisons are library-based, with salaries paid by the library.

Two liaisons are unit-based, with salaries paid by their respective college (nursing) or institute (genetics). These unit-based liaisons spend the majority of their time serving their respective constituents and are able to provide virtually any service requested by their units. Such integration approximates the ISIC model.

However, the two unit-based liaisons have taken disparate educational paths to reach this end. The bioinformatics librarian, funded by the UF Genetics Institute, has found her doctoral degree in biology essential to understanding vocabulary and becoming proficient in the use of bioinformatics fact-based databases and analysis tools [12]. The college of nursing liaison is not a nurse but has employed a variety of strategies to gain the needed expertise to provide such integrated service, including her previous experience as a hospital librarian working closely with nurse educators, appropriate continuing education courses from MLA and nursing organizations, extensive reading in the discipline, and discussions with faculty about their areas of specialization and research interests. Such strategies have been noted in the literature for their utility in developing a background in the area of nursing [13].

Only two other HSCL liaisons have an academic background in their assigned areas, yet the survey results (especially open-ended responses) suggest that the faculty and students from all subject areas who have been in contact with their liaisons are satisfied with the liaison program. These results imply that a formal background in the field is not the only way for liaisons to gain sufficient subject proficiency to provide services at a level satisfactory to clients. It remains unclear whether such "on-the-job" training is likely to be adequate for those seeking to perform duties at the ISIC level.

The survey results reported above, in combination with the experiences of the HSCL's liaison librarians, suggest that subject knowledge sufficient to meet the expectations of clients may be acquired through on-the-job training, continuing education courses, and membership and participation in professional associations and their subunits. Although the client survey response rate is low, respondents find subject knowledge to be important. These data suggest the importance of developing subject knowledge to provide liaison services that meet client needs.

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Received August 2005; accepted March 2006

APPENDIX

Client survey: subject specialization questions

Some liaison librarians have expertise in the subject area to which they are liaison. How important is it that your liaison librarian have a subject background in your field?

— Very important — Somewhat important — Not important

How important is it for your liaison librarians to involve themselves in your field (i.e., attend conferences, receive newsletters, read top journals, etc.)?

— Very important — Somewhat important — Not important

Liaison survey: subject specialization question

Which activities have you performed to help yourself become a better subject specialist/liaison?

— Joined the appropriate Medical Library Association (MLA)/Special Libraries Association (SLA) division, section, special interest group

— Joined the appropriate MLA/SLA email discussion list(s)

— Took continuing education course(s) in your subject area

— Took academic course(s) in your subject area

— Attended academic seminar(s) in your subject area

— Read the subject literature

— Read academic department newsletters

— Frequently visited department faculty Web pages

— Other. Please describe —